

**From:** [HOPE Bruce](#)  
**To:** [Eric Blischke/R10/USEPA/US@EPA](#); [csmith@parametrix.com](#)  
**Cc:** [rgensemer@parametrix.com](#)  
**Subject:** RE: Parameters for LWR FWM used for Round 2 report  
**Date:** 03/14/2007 01:19 PM

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Eric,

Yes, I have institutional knowledge here but I always seem to get dragged into more than just offering a few historical highlights. So I wasn't planning on attending, both to avoid being the discussion and (more importantly) to reinforce that Burt is now the principal point of contact on food web modeling. I won't even go into the "DEQ not doing EPA's work" bit...

I have supplied Burt with several comments regarding the FWM submitted by Windward (re: Nancy's email below). In short, I identified some concerns and Burt is aware of them. Recently, John Toll raised a further issue about the FWM. Frankly, I've been trying to figure out why it's an issue and, if so, why it wasn't elevated months ago? I have a call into Burt about this but haven't reached him yet.

Bruce

-----Original Message-----

From: Blischke.Eric@epamail.epa.gov  
[mailto:Blischke.Eric@epamail.epa.gov]  
Sent: Wednesday, March 14, 2007 12:07 PM  
To: csmith@parametrix.com; HOPE Bruce  
Cc: rgensemer@parametrix.com  
Subject: Fw: Parameters for LWR FWM used for Round 2 report

Carrie and Bruce, see the note about a meeting to discuss the FWM and Fate and Transport Models. We will not because Burt is generally unavailable. (b) (6)

(b) (6) howev to include me. I would like to meet no later than the first week in April.

Bruce, I am not sure if you were planning on participating in this discussion or if you need to. I recognize that we are transitioning to the Burt and Carrie show but your institutional knowledge may be useful. Let me know if you have time and/or interest for this meeting and what dates and times work for you during the week of March 26th and April 2nd.

Carrie, please send me your availability as well. I think the meeting on the 20th with Ben and Earl is a go and should be a good segue into further discussions on fate and transport.

Eric

----- Forwarded by Eric Blischke/R10/USEPA/US on 03/14/2007 11:59 AM

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John Toll  
<johnt@windwardenv.com>

03/13/2007 12:25 PM

Burt Shephard/R10/USEPA/US@EPA To  
cc

Nancy Judd  
<nancyj@windwardenv.com>, Lisa  
Saban <lisas@windwardenv.com>,  
Carl Stivers  
<cstivers@anchorenv.com>, Gene  
Revelas  
<grevelas@integral-corp.com>,  
Eric Blischke/R10/USEPA/US@EPA,  
Bob Wyatt <rjw@nwnatural.com>,  
Rick Applegate  
<RICKA@BES.CI.PORTLAND.OR.US>,  
"McKenna, James (Jim)"  
<Jim.McKenna@portofportland.com>,  
Valerie Oster  
<voster@anchorenv.com>

Subject  
RE: Parameters for LWR FWM used  
for Round 2 report

Hi Burt. I'm writing to follow up on my calls trying to schedule a food web modeling meeting. The purpose of the meeting is twofold:

1. To answer questions about the food web modeling work described in the Round 2 report.

2. Per Carl Stiver's March 6 e-mail (below), to agree on the parameters and any final FWM refinements needed to complete the hybrid modeling that's scheduled to be completed in April.

A bridge between these two topics is that we still haven't met to talk about the Round 2 FWM parameters that we sent to Eric and Chip on 12/15/06 (see bottom of this message and attached). At this point I'm not expecting any serious questions or concerns about those parameter values, but if there are we'll need to resolve them before we can settle on FWM parameters for hybrid modeling.

The hybrid modeling is on the critical path for identifying any remaining data gaps related to fate and transport objectives for the RI/FS in the summer, so it's important that we schedule this food web modeling meeting as soon as possible. This week is booked up, but as of now Nancy Judd and I are both available to meet anytime next week or the week after. Please let us know what dates would work for you. This will probably have to be a face-to-face meeting and we should plan on at least a few hours, maybe longer. We understand that you have a lot on your plate with the Round 2 report review (not to mention your other work!), so please let us know if there are things we can do to catalyze your team's review of the Round 2 food web modeling.

Thanks,

John

John Toll, Ph.D.  
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From: Carl Stivers [mailto:cstivers@anchorenv.com]  
Sent: Tuesday, March 06, 2007 11:57 AM  
To: humphrey.chip@epa.gov; blischke.eric@epa.gov  
Cc: Carrie Smith; HOPE Bruce; rjw@nwnatural.com;  
jim.mckenna@portofportland.com; shephard.burt@epa.gov; Valerie Oster;  
John Toll; Nancy Judd; hhu@westconsultants.com; Ray Walton; Gene Revelas; Keith Pine  
Subject: Fate and Transport Modeling Status Update

Chip and Eric -

Here is an update on the Fate and Transport Modeling status. Such an update was requested by EPA recently.

The overall modeling approach and draft schedule was agreed to in a joint LWG/EPA partner meeting in late November 2005. The highlights of that approach and schedule were:

1. EPA/partners and LWG would work jointly to develop specific aspects of the overall Hybrid Model approach.
2. West Consultants would generate an example hydrodynamic output table for use by Carrie Smith of Parametrix and Carl Stivers of Anchor to determine the Abiotic Fate and Transport model data interface.
3. Carrie Smith and Carl Stivers would work jointly to make refinements to the Abiotic Fate and Transport Model based on technical points agreed at the meeting.
4. Windward would exchange Food Web Model parameterization information with the EPA/partner team and review the dynamic version of the Food Web Model provided by Bruce Hope at the Nov. 2006 meeting. It was also agreed that once information had been reviewed a conf. call (or calls) would take place to agree on the parameters and any final Food Web Model refinements for the Hybrid Model purposes.
5. More specific action items steps were identified that culminated in a "test run" of the entire model would be completed by mid-January.
6. This would lead to additional test runs to identify any fate and transport modeling data gaps all of which would be eventually presented in a report around early May 2007.

The actual progress relative the above goals are as follows:

1. There have been some overall delays in getting to the desired point for the first Hybrid Model "test run" including the following major items:
  - a. The Hydrodynamic model output functions had to be completely recoded to provide outputs in the box format required. This took considerable extra time.
  - b. Staff availability on both sides of the team was sometimes limited during this period due to various issues.
  - c. A second conf. call to finish Food Web Model discussions/info. exchange was scheduled but the agency team had to cancel. This call is currently being rescheduled (see below).

2. The example Hydrodynamic model output table was provided to Carrie and Carl on Feb. 12 and coding of the Abiotic Fate and Transport model interface is underway.
3. Carrie and Carl have discussed other agreed refinements to the Abiotic Fate and Transport Model and Carrie has taken the lead on actual code changes with review from Carl. The final changes to the Abiotic Model could not be completed until the hydrodynamic model example table was available (per item 2 above).
4. Information was exchanged on the Food Web Model and one conf. call was held to discuss basic issues. The second conf. call to complete these discussions is currently being rescheduled by Windward (see below).

Suggested Path Forward:

1. Carrie and Carl complete changes and review of changes to Abiotic Fate and Transport Model by mid-March.
2. Food Web Modeling subteam convene and agree to final elements of Food Web Model as part Round 2 roll out meeting on Food Web Modeling in Early-March
3. Windward makes final revisions to Food Web Model based on meeting discussions. A reasonable date for this is dependent on the changes needed and can be set during the meeting.
4. Interface between Abiotic Fate and Transport and Food Web Models confirmed using example run data late March
5. Run full test cases of entire Hybrid Model (mid-April)
6. Conduct sensitivity analyses for data gaps identification (late-April)
7. Write up draft report (May)
8. Submit draft report to EPA/LWG (late-May)

The above suggested path forward would allow us to identify any remaining data gaps related to fate and transport objectives for the RI/FS in the summer and collect any such needed data in the fall of 2007, which will parallel the other Round 3B data collection activities that will come out of the Round 2 Report discussions.

Let me know if there are any questions.

Carl

Carl Stivers  
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From: Nancy Judd  
Sent: Friday, December 15, 2006 10:41 AM  
To: Eric Blischke (blischke.eric@epa.gov); Humphrey.Chip@epamail.epa.gov  
Cc: Bob Wyatt; Rick Applegate; McKenna, James (Jim); Lisa Saban; John Toll; Valerie Oster  
Subject: Parameters for LWR FWM used for Round 2 report

Eric and Chip,  
Please find attached uncalibrated parameter distributions and explanations (Attachment 3 and 4 associated figures) and empirical tissue concentrations (Attachment 4) used for food web model development for the Round 2 report. We have attempted to incorporate comments from EPA and its partners from the last iteration of the FWM (2005). Also attached is a copy of the model for total PCBs with parameter distributions included. You need to have Crystal Ball software to view the distributions and run the model probabilistically. (Note we did not use the third tab of the model workbook). The model code is the same code Bruce Hope sent to us in June except for a few changes which we provided to Bruce in emails over the summer. As Eric suggested in his email Wednesday, we can add a quantitative comparison to our uncertainty analysis in the Round 2 report of the two approaches for inclusion of water chemistry data in the model (i.e. as dissolved or as total chemical concentrations).

Some of the parameter values we have chosen differ from those Bruce has been using in his new time varying version of the model for Fate and Transport applications. Our primary application for the Round 2 report was development of iPRGs, and we were using the steady state version of the model. Thus, for parameters like temperature and diet, where over the course of a year more extreme conditions might be experienced, we were trying to model average annual conditions (and the uncertainty surrounding estimates of average conditions). For example, in a model that is run daily, temperatures on some days might be 7 degrees, but the annual average would not be 7 degrees. Similarly, a pikeminnow might on one day eat 40% zooplankton, but the pikeminnow population on average over a year would not. We have already applied these parameter values for iPRG development for the Round 2 report (which EPA will receive in February), but we are open to discussing parameter values that may be appropriate for future modeling applications such as in the time varying version of the model for fate and transport applications. Nancy

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\*\*\*\*\* ATTACHMENT NOT DELIVERED  
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For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

\*\*\*\*\* ATTACHMENT NOT DELIVERED  
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[ Attachment LWG Round 2 report FWM parameters (12\_15\_06 preview).zip removed ]